

## CONSUMER BEHAVIOR TO USE THE INFORMATION CONTAINED ON MEAT AND DAIRY PRODUCTS' PACKAGING

### ET VE SÜT ÜRÜNLERİ AMBALAJLARI ÜZERİNDE BULUNAN BİLGİLERİ KULLANMAYA YÖNELİK TÜKETİCİ DAVRANIŞLARI

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**Geliş Tarihi:**

31.03.2023

**Kabul Tarihi:**

25.08.2023

**Yayın Tarihi:**

25.09.2023

**Anahtar Kelimeler**

Ambalaj  
Tüketici Tutumu  
Son Kullanma Tarihi  
Et Ürünleri  
Süt Ürünleri

**Keywords**

Package  
Consumer Attitude  
Expiration Date  
Meat Products  
Dairy Products

Bu çalışmanın amacı; tüketicilerin ambalajlı et ve süt ürünlerini satın alırken, ambalaj üzerindeki bilgilere ne derece dikkat ettiklerinin ortaya çıkarılmasıdır. Çalışma kapsamında öncelikle, sıklıkla tüketilen ve kolayca ulaşılabilen ambalajlı et ve süt ürünlerinin üzerinde yer alan bilgiler market vb. yerlerde incelenerek tespit edilmiştir. Daha sonra söz konusu bilgilerden yola çıkarak yazarlar tarafından anket soruları geliştirilmiştir. Elde edilen verilere faktör analizi, bağımsız örneklem T-Testi ve ANOVA analizi yapılmıştır. Elde edilen sonuçlara göre; araştırmaya katılanlar, ürünlerin son kullanma tarihini, üretim tarihini ve tavsiye edilen tüketim tarihini yüksek oranda kontrol etmektedir. Et ve süt ürün türüne göre, içindikiler ve ürün/sertifika boyutunda araştırmaya katılanlar arasında anlamlı farklılık varken, tarih boyutunda araştırmaya katılanlar arasında anlamlı farklılık yoktur. Medeni duruma göre de, içindikiler ve ürün/sertifika boyutunda anlamlı farklılık varken, tarih boyutunda farklılık yoktur. Yaş grupları açısından değerlendirildiğinde, her üç boyutta da anlamlı bir farklılık yoktur. Aynı şekilde, eğitim durumunda da anlamlı bir farklılık yoktur.

#### ABSTRACT

The purpose of this study is to find out to what degree which consumers pay attention to the information given on the package when purchasing meat and dairy products. Firstly, the information on packed meat products and dairies that are frequently consumed and easily accessible in supermarkets and marketplaces were examined. Afterwards, based on the given information on packages, survey questions were developed by authors. Factor analysis, independent samples T-Test and ANOVA analysis were made to collected data. According the results; participants in the research highly checked the product's expiration, production and recommended consumption dates. As for meat products and dairies, there is a significant difference between participants in the research in terms of ingredients and product/certificate aspects. However, there is no significant difference between participants in the research as far as the date is concerned. Regarding marital status, while there is a significant difference in ingredients and product/certificate aspects, but there is no difference as far as the date is concerned. Evaluating age groups, there is no significant difference among the age groups in all three aspects. Likewise, there is no significant difference in terms of educational backgrounds.

**DOI:** <https://doi.org/10.30783/nevsosbilen.1274775>

**Atıf/Cite as:** Özkan, B., & Koç, F. (2023). Consumer behavior to use the information contained on meat and dairy products' packaging. *Neşehir Hacı Bektaş Veli Üniversitesi SBE Dergisi*, 13(3), 1528-1540.

## Introduction

The purchase of food products is the most common consumer behaviour which people do to maintain their lives. Food products are in the group of important consumer goods groups in which packaging is of great importance. Packaging is very important as it informs consumers of the information of the product as well as its protective function.

The primary function of the package is to protect products and to ease the handling, which is of great importance in the food industry. Packaging is also considered to be a significant marketing tool for food products (Silayoi and Speece, 2004). In addition to this, packaging becomes a symbol that conveys a positive or negative message for the product (Silayoi and Speece, 2007).

Consumers consider some factors such as brand, nutrition value, satiety, production and expiration date, hygiene in the manufacture and retail sites while purchasing food products (Kızılaslan and Kızılaslan, 2008). However, as the perceived quality risk of products decreases, the rate of checking the expiration date lowers (Tsiros and Heilman, 2005). The factors that consumers prioritize in food products are the expiration date, the TSE (Turkish Standards Institution) stamp, the brand of the product, individual habits of consumers and packaging, respectively (Sağlam et al., 1999). Güneş et al., who studied the attitudes and behaviours of consumers towards food packages, concluded that consumers read milk and dairy products and meat and meat products the most. Besides, they found that the most read information on the packages of milk and meat products is the expiration date whereas the least read information is health facts. The expiry date has been the most important fact on food products' labels for a long while (Özgül and Aksulu, 2006).

In packaged food consumption, factors that individuals can control are limited by the information on the package. There are some studies limited to the information on labels in packaged products. On the other hand, there are other studies investigating the existence of different substances found in the product which are not mentioned on the package label (Fierens et al., 2012). Various information on the package is written in different font sizes and shapes. The information written in small sizes may not be read. To be more precise, the information about nutrition facts are written in smaller font sizes compared to other information or facts. 27% of consumers read the nutrition facts before choosing a packaged food product (Grunert et al., 2010).

Packaging methods of milk and dairy products are changing day by day to meet the needs of consumers and other food industries. New packaging methods in the food industry use facilities not only for protection but also for extending shelf lives and/or improving the functional qualities of products. Especially recent methods can be evaluated as extremely sophisticated methods so as to evaluate the freshness of products (Ščetar et al., 2019). Packaging of milk and dairy products has less significance for consumers when compared to the taste of the product, trust for the product, product brand, healthiness, promotion and the place of purchase (Bousbia et al., 2017). While consumers purchase milk and dairy products, they pay attention to the expiration date on the package the most, which reflects the tendencies of consumers to buy and consume fresh dairies. In addition to this, while the volume/weight of the product and storing/protecting conditions have an impact on the consumer's purchase decision, ingredient facts do not have an impact on the decision (Mutsikiwa and Marumbwa, 2013).

Consumers pay attention to brand and manufacturer name, country of origin and company address information on the package. However, in milk and dairy products, the most important criterion for the purchase is the brand name. This expresses that consumers can evaluate all the other factors by the brand name (Mutsikiwa and Marumbwa, 2013).

Regarding meat and meat products there are a lot of factors that shape consumer behaviours. For this reason, consumers' perception, preferences and behaviours regarding meat and meat products differ and they not only depend on the appearance and sensorial properties of the meat but also on psychological and marketing aspects (Font-İ-Furnols and Guerrero, 2014). Nutrition facts on packaged meat and meat products are read by most of the consumers (70-80%) (Piedra et al., 1996; Schupp et al., 1998). On the other hand, one of every five consumers is unaware of the nutrition information on the packaged fresh meat products. Almost 25% of consumers state that there is no nutrition information on the package (Schupp et al., 1998).

In this study, it is aimed to reveal how much consumers use the information on the packaging, in other words, how much they read this information while purchasing packaged meat and dairy products. This study is

important because meat and dairy products are rich in content and important in terms of preparation, and the information on their packaging is information that needs attention. The fact that there are very few studies on the use of information on packaged food products in Turkey, and a detailed examination of the attention levels of consumers for all this information on the packages of meat and dairy products are the main reasons for this study. A comprehensive study was carried out for the information contained in the packages of these products, which are frequently consumed by consumers in their daily lives, and a study was conducted with a new scale that was not used before. This scale has been developed to be a study in which all the information contained in the packaging of the food products in question is used.

### **Materials and Methods**

In this study, it is aimed to reveal how much the information on the packages of meat and dairy products that we consume frequently in our daily lives are used by consumers and whether this use differs in terms of demographic variables. Looking at the packaging of meat and dairy products, it is possible to say that the information on them consists of about twenty different elements.

The survey method was employed to gather data. To determine the question of the survey, the data on the packages of 12 different meat and dairy products are chosen from 6 market chains (2 regional and 4 national). The collection of the aforementioned information, the creation of the questionnaire and the collection of the data were carried out in Bursa and Kocaeli provinces between May and December 2021. The data which were obtained from packages contained expiration, production and recommended consumption dates, energy, nutrition, fat, sugar, salt, carbohydrate and protein values, price, brand, amount, conservation and consumption conditions and certificates. The data were recorded analysing all of the products. Almost all of the information given on the packages were the same in meat and dairy products.

Two different surveys were formed for meat and dairy products each of which contained 21 questions. The information given on the packages were changed into “attitude” statements. The questionnaires were given online. Pre-tests were given to 45 people. Besides, people who bought the packaged meat and dairy products were interviewed, which enabled verification.

The survey consisted of 2 parts. In the first part, there were demographical questions and questions about assessing whether they had read the information on the packages or not. In the second part, two different survey groups were created to determine the consumer behavior towards the information contained in the packages of meat and meat products/milk and dairy products. In this section, the participants participated in only one of the questionnaires regarding the information on the packaging of meat and meat products or milk and dairy products. (At this stage, the participants were asked a question with two options and they were directed to a survey about a product that selected the first option, and to a survey about the other product that selected the other option). In this way, it was aimed to determine whether there is a difference in the attitudes towards the information on the packaging of meat and dairy products.

Survey questions prepared online were sent to participants via social media, email and some were employed face-to-face. In the research, 5-point Likert scale was used (1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5- Strongly Agree). The data were evaluated using the SPSS program which were obtained from 462 surveys (172 online and 290 face-to-face).

### **Research Hypotheses**

H<sub>1</sub>: The behavior of the participants towards the information on the packaging (a-ingredients, b-date, c-product/certificate) differs according to their gender.

H<sub>2</sub>: The behavior of the participants towards the information on the packaging (a-ingredients, b-date, c-product/certificate) differs according to meat and dairy products.

H<sub>3</sub>: The behavior of the participants towards the information on the packaging (a-ingredients, b-date, c-product/certificate) differs according to their marital status.

H<sub>4</sub>: The behavior of the participants towards the information on the packaging (a-ingredients, b-date, c-product/certificate) differs according to their age.

H<sub>5</sub>: The behavior of the participants towards the information on the packaging (a-ingredients, b-date, c-product/certificate) differs according to their educational status.

H<sub>6</sub>: The behavior of the participants towards the information on the packaging (a-ingredients, b-date, c-product/certificate) differs according to their going shopping frequency.

### Findings

#### Demographic Findings

229 (49,6%) participants who took part in the research answered questions regarding milk and dairy products, 233 (50,4%) participants answered questions regarding meat and meat products. The demographic information about the participants is given in Table 1.

**Table 1.** Demographic Characteristics of Participants

<b>Gender</b>	<b>Frequency</b>	<b>Percentage(%)</b>	<b>Marital state</b>	<b>Frequency</b>	<b>Percentage(%)</b>
Male	216	46,8	Single	228	49,4
Female	246	53,2	Married	233	50,4
<b>Total</b>	<b>462</b>	<b>100</b>	Missing value	1	0,2
			<b>Total</b>	<b>462</b>	<b>100</b>
<b>Going Shopping frequency</b>	<b>Frequency</b>	<b>Percentage(%)</b>	<b>Education</b>	<b>Frequency</b>	<b>Percentage(%)</b>
Once a week	125	27,1	Elementary school graduate	34	7,4
Twice a week	130	28,1	Middle school graduate	58	12,6
Thrice a week	84	18,2	High school graduate	113	24,5
More than thrice a week	119	25,8	College graduate	74	16,0
Missing value	4	0,9	Bachelor's degree	135	29,2
<b>Total</b>	<b>462</b>	<b>100</b>	Master degree	48	10,4
			<b>Total</b>	<b>462</b>	<b>100,0</b>

216 participants were male whereas 246 were female. 228 were single while 233 were married. The educational level was high for most of the participants. The mean age of participants was 32,2560.

The mean of the expressions used in the research conducted on the use of the information on the packages of packaged meat and dairy products are shown in Table 2.

**Table 2.** Items Means

<b>NO</b>		<b>N</b>	<b>Mean</b>
info1	I pay attention to energy and nutrition values while purchasing packaged meat or meat/milk or dairy products	462	3,3747
info2	I pay attention to fat value while purchasing packaged meat or meat/milk or dairy products	462	3,4672
info3	I pay attention to saturated fat value while purchasing packaged meat or meat/milk or dairy products	462	3,1538
info4	I pay attention to carbohydrate value while purchasing packaged meat or meat/milk or dairy products	462	3,0786
info5	I pay attention to sugar rate while purchasing packaged meat or meat/milk or dairy products	462	3,1700
info6	I pay attention to protein value while purchasing packaged meat or meat/milk or dairy products	462	3,4179

info7	I pay attention to salt rate while purchasing packaged meat or meat/milk or dairy products	462	3,0965
info8	I pay attention to choosing the product that doesn't contain any trans fatty while purchasing packaged meat or meat/milk or dairy products	462	3,5570
info9	I pay attention to the expiration date while purchasing packaged meat or meat/milk or dairy products	462	<b>4,6529</b>
info10	I pay attention to the production date while purchasing packaged meat or meat/milk or dairy products	462	<b>4,5404</b>
info11	I pay attention to recommended consumption date while purchasing packaged meat or meat/milk or dairy products	462	<b>4,5812</b>
info12	I pay attention to brand name while purchasing packaged meat or meat/milk or dairy products	462	4,5213
info13	I pay attention to the price while purchasing packaged meat or meat/milk or dairy products	462	4,1451
info14	I read the conservation and consumption conditions while purchasing packaged meat or meat/milk or dairy products	462	3,8311
info15	I pay attention to the country of origin while purchasing packaged meat or meat/milk or dairy products	462	3,6088
info16	I pay attention to the producer company while purchasing packaged meat or meat/milk or dairy products	462	3,6930
info17	I pay attention to the amount (number, weight) while purchasing packaged meat or meat/milk or dairy products	462	3,7765
info18	I pay attention to that it has a halal certificate while purchasing packaged meat or meat/milk or dairy products	462	3,9194
info19	I pay attention that the package isn't opened, torn, ruined while purchasing packaged meat or meat/milk or dairy products	462	<b>4,7657</b>
info20	I pay attention to the ingredients list while purchasing packaged meat or meat/milk or dairy products	462	3,3982
info21	I pay attention that it has TSE certified while purchasing packaged meat or meat/milk or dairy products	462	3,8695

In Table 2, it is clear that consumers pay attention to the date information of packaged meat and dairy products considerably. Besides, consumers are careful about whether the package is opened, torn, ruined.

Exploratory factor analysis was made for the 21 statements and data regarding meat and dairy products. KMO value was 0,928 and Barlett significance level was 0,001. Factor analysis can be applied to the data set which was obtained accordingly KMO and Barlett test (Tabachnick and Fidell, 2015). The factor analysis results are shown in Table 3.

**Table 3. Exploratory Factor Analysis Results**

Items that form the scale	Factors			Eigenvalue*	Explained Variance*	Cronbach Alpha
	Ingredients	Product/Certificate	Date			
info4	,862			5,813	30,597	0,931
info5	,852					
info3	,837					
info6	,814					
info7	,801					
info1	,774					
info2	,742					
info8	,681					
info20	,560	,464				
info15		,760		3,620	19,055	0,832

info17	,730				
info16	,720				
info18	,692				
info14	,625				
info13	,548				
info21	,531				
info9	,830	2,221	11,689	0,765	
info10	,795				
info11	,764				
<b>Explained Total Variance</b>		<b>61,341</b>			

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.  
 a. Rotation converged in 5 iterations.  
 \* Values following rotation

In the exploratory factor analysis, the 12th and the 19th items were removed from the scale since their factor loads were low. Any item with a lower factor load than 0,50 was ignored. As the result of the factor analysis, 3 aspects emerged. Then confirmatory factor analysis was made in 2 stages. The structure acquired with the exploratory factor analysis was used in the same way in the confirmatory factor analysis. However, as the model adaptive values were not at the intended level, info20 was removed from the scale. In addition, info5 and info6 were merged with info5 and info7. The factor structure obtained by these processes is presented in Table 4.

**Table 4. Confirmatory Factor Analysis Results**

Items - Variables	Factor Loadings	Model Fit Indices
info7	INGREDIENTS ,764***	
info6	INGREDIENTS ,784***	
info5	INGREDIENTS ,810***	
info4	INGREDIENTS ,850***	
info3	INGREDIENTS ,855***	CMIN/DF= 2,735
info2	INGREDIENTS ,759***	
info1	INGREDIENTS ,782***	RMR= 0,079
info8	INGREDIENTS ,717***	
info16	PRODUCT/CERTIFICATE ,692***	GFI= 0,919
info15	PRODUCT/CERTIFICATE ,758***	
info14	PRODUCT/CERTIFICATE ,732***	AGFI= 0,893
info13	PRODUCT/CERTIFICATE ,515***	
info17	PRODUCT/CERTIFICATE ,621***	CFI= 0,947
info18	PRODUCT/CERTIFICATE ,556***	
info21	PRODUCT/CERTIFICATE ,627***	RMSEA= 0,067
info9	DATE ,698***	
info10	DATE ,734***	
info11	DATE ,731***	

Concerning the factor structure obtained as the result of the confirmatory factor analysis, some additional analyses were made for the validity of the scale. These analyses are shown in Table 5.

**Table 5. Validity Analyses**

Aspects	CR	AVE	MSV	Product/Certificate	Ingredients	Date
Product/Certificate	0,833	0,420	0,320	<b>0,648</b>		
Ingredients	0,930	0,626	0,320	0,566	<b>0,791</b>	
Date	0,765	0,520	0,231	0,481	0,306	<b>0,721</b>

It is recommended that AVE values be higher than 0,50 and CR Values, 0,70 [21]. In addition, MSV values should be lower than AVE values (Gaskin, 2021). In this case, it can be said that CR, AVE and MSV values are at the desired level. In addition to this, the AVE value of the product/certificate should be lower than 0,50. However, as long as other conditions are fulfilled and Fornell Larcker conditions fit it can be concluded that 0,420 AVE values do not pose a problem (Fornell and Larcker, 1981). When Fornell Larcker criteria values on the right side of the table are analysed, it is clear that the numbers that are bold on the diagonal part (AVE values that are out of stem) are higher than the correlation values. When all the results are analysed, it can be concluded that convergent validity and discriminant validity were provided.

To identify whether there was any difference between the groups, difference analysis were made. To determine if there was any difference between genders, an independent samples T-Test was made. Results of the independent samples T-Test between genders are shown in Table 6.

**Table 6. Independent Samples T-Test Between Genders**

Variables	Independent Samples T-Test					Mean	
	Levene Test		T-Test			Female	Male
	F	Sig.	t	df	Sig.		
Ingredients	,132	,717	-2,615	460	,009	3,413	3,149
			-2,610	448,859	,009		
Date	2,519	,113	-2,103	460	,036	4,645	4,531
			-2,088	435,364	,037		
Product/Certificate	,439	,508	-2,201	460	,028	3,918	3,740
			-2,192	444,165	,029		

According to Table 6, in all aspects, there is a significant difference between female and male consumers. According to the results obtained, in all aspects, female paid more attention when compared to male. According to T-Test results,  $H_{1a}$ ,  $H_{1b}$ , and  $H_{1c}$  hypotheses accepted.

To determine whether there is a difference between participants who answered meat/meat products and milk/dairy products items independent samples T-Test was employed whose results are shown in Table 7.

**Table 7. Independent Samples T-Test for Meat and Dairy Product Type**

Variables	Independent Samples T-Test					Mean	
	Levene Test		T-Test			MEAT	MILK
	F	Sig.	t	df	Sig.		
Ingredients	1,241	,266	-2,397	460	,017	3,410	3,168
			-2,398	459,858	,017		
Date	1,132	,288	-,105	460	,917	4,594	4,589
			-,105	459,328	,917		
Product/Certificate	2,918	,088	-3,287	460	,001	3,965	3,702
			-3,292	445,583	,001		

According to Table 7, whereas there was a significant difference between meat and dairy products in terms of ingredients and product/certificate, there was no significant difference regarding the date. According to T-Test results,  $H_{2a}$ , and  $H_{2c}$  hypotheses accepted, and  $H_{2b}$  hypothesis rejected.

Independent Samples T-Test to see if there is any difference regarding marital status results are shown in Table 8.

**Table 8. Marital Status-Independent Samples T-Test**

Variables	Independent Samples T-Test					Mean	
	Levene Test		T-Test			Married	Single
	F	Sig.	t	df	Sig.		
Ingredients	,474	,492	-2,376	459	,018	3,408	3,167
			-2,378	458,705	,018		
Date	2,735	,099	-1,328	459	,185	4,626	4,554
			-1,327	453,418	,185		
Product/Certificate	,801	,371	-2,749	459	,006	3,944	3,722
			-2,752	455,750	,006		

According to Table 8, there was a significant difference between married and single consumers regarding ingredients and product/certificate aspects. Married consumers paid more attention than single consumers for both aspects. According to T-Test results, H<sub>3a</sub>, and H<sub>3c</sub> hypotheses accepted, and H<sub>3b</sub> hypothesis rejected.

ANOVA analysis was made to see if there was any difference regarding age groups. ANOVA analysis made regarding age groups is shown in Table 9.

**Table 9. Age Groups-ANOVA Analysis**

Variables	ANOVA			
	Total of the Squares	SD	F	Sig.
Ingredients	10,088	4	2,153	,073
Date	,601	4	,437	,782
Product/Certificate	6,270	4	2,082	,082

In Table 9, it is clear that there was no significant difference in all aspects regarding the age groups. Age groups are categorized as 18-27, 28-37, 38-47, 48-57, 58 and above. According to Anova analysis results, H<sub>4a</sub>, H<sub>4b</sub> and H<sub>4c</sub> hypotheses rejected.

ANOVA analysis was used to see whether there was a significant difference in terms of consumers' educational status results and the results are shown in Table 10.

**Table 10. Educational Status-ANOVA Analysis**

Variables	ANOVA			
	Total of the Squares	SD	F	Sig.
Ingredients	5,981	5	1,012	,410
Date	2,237	5	1,315	,256
Product/Certificate	2,629	5	,691	,630

When Table 10 is analysed, it can be seen that there was no significant difference between consumers regarding their educational status. The educational status was categorized as elementary school graduate, middle school graduate, high school graduate, college graduate, bachelor's degree and master degree. According to Anova analysis results, H<sub>5a</sub>, H<sub>5b</sub> and H<sub>5c</sub> hypotheses rejected.

ANOVA analysis results to see if there is any significant difference between consumers regarding going shopping frequency are shown in Table 11.

**Table 11. Going Shopping Frequency-ANOVA Analysis**

Variables	ANOVA			
	Total of the Squares	SD	F	Sig.
Ingredients	12,004	3	3,446	,017
Date	1,243	3	1,206	,307
Product/Certificate	4,330	3	1,934	,123



According to Table 11, there is a significant difference between consumers regarding ingredient. According to Anova analysis results,  $H_{6a}$ , hypothesis accepted, and  $H_{6b}$  and  $H_{6c}$  hypotheses rejected. To determine the difference, a Post-Hoc test was employed. Before interpreting the Post-Hoc test, it was checked whether the variances were distributed homogeneously. The test of homogeneity of variances is shown in Table 12.

**Table 12. Homogeneity of Variances**

Test of Homogeneity of Variances					
Ingredients	Based on Mean	Levene Statistic	df1	df2	Sig.
		4,111	3	454	,007

In Table 12, it is seen that the variances were not distributed homogeneously ( $0,007 < 0,05$ ). For this very reason, Games Howel test is used as a Post-Hoc test. Games Howel Post-Hoc test results are shown in Table 13.

**Table 13. Going Shopping Frequency-Games Howel Post-Hoc Test**

Going Frequency	Shopping Frequency	Mean Difference (I-J)	Std. Error	Sig.
Once a week	Twice a week	-,32950*	,12612	,047
	Thrice a week	-,44450*	,14797	,016
	More than thrice a week	-,18285	,14684	,599
Twice a week	Once a week	,32950*	,12612	,047
	Thrice a week	-,11500	,14247	,851
	More than thrice a week	,14665	,14130	,727
Thrice a week	Once a week	,44450*	,14797	,016
	Twice a week	,11500	,14247	,851
	More than thrice a week	,26165	,16110	,367
More than thrice a week	Once a week	,18285	,14684	,599
	Twice a week	-,14665	,14130	,727
	Thrice a week	-,26165	,16110	,367

\*. The mean difference is significant at the 0.05 level.

In Table 13, there was a difference between people who go to the market once a week and twice a week (sig. 0,047) and a difference between people who go to the market once a week and thrice a week (sig. 0,016).

### Result, Discussion and Suggestions

In this study, which aims to determine the behavior of consumers towards the use of information on the packaging of packaged meat and dairy products, it has been concluded that consumers pay attention to date information the most. The least attention paid information is the information about the content of the product. As these products are nondurable, they should be consumed in a short amount of time, which makes the date information crucial for the participants.

According to the T-Test analysis, when female and male were compared, it was found that there was significant difference in the ingredients, date and product/certificate aspects. However, in each aspect, female had a higher mean than male. According to a study, attention given to the information on food was very low in the 1990's and there was no difference between female and male, which later got higher attention and female were more careful than male (Özgül and Aksulu, 2006). In food consumption, female care more about healthy diets than male, which may be the result of female being more inclined to keep their weight under control and their strong beliefs in healthy diets (Wardle et al., 2004).

As the result of the analysis made for meat and dairy products, consumers check the date of the products while purchasing meat and dairy products. This result shows that the product's date information (expiration date, production date, recommended consumption date) is important for consumers. Because meat and dairy products are nondurable products, expired dates threaten health, so the date information is significant. The dates on packaged products are checked more often by experienced consumers (Tsiros and Heilman, 2005). The expiry date is the factor that consumers pay the most attention to in food (Özkan, 2022). Expiry dates are especially important for perishable food products, which may prevent consumers from spoiling. On the other hand, sellers attach importance to profitability (Wu et al., 2018). In terms of ingredients and product/certificate aspects, however, there is a significant difference between meat and dairy products. Thus, as far as the ingredients of meat and dairy products and product/certificate aspects are concerned variables result in various interpretations, which shows that individuals distinctively emphasize various factors such as health, materiality, taste.

When individuals are analysed by their marital status, married and single consumers are alike in caring the date information of meat and dairy products. This shows that date information of meat and dairy products are important for everyone. Married individuals care more about the ingredients and product/certificate aspects than single individuals. As family members, married individuals care more about the ingredients and certificates. According to a study, there is a significant difference between married individuals and single individuals in terms of eating out habits (Çalmaşur and Daştan, 2020). In another study, it is shown that married individuals tend to eat out than single individuals (Bitrak and Hatırlı, 2009).

All individuals, regardless of age, care about 3 aspects of meat and dairy products. All consumers who can shop for themselves or their families regard the information on meat and dairy products, which is an indicator that any individual from every age group is responsive to this.

No matter what the education status is, individuals' approaches to packaged meat and dairy products are alike. This shows that education status is not a factor in caring about product information. In the same way, checking information on packages doesn't require education.

When consumers are analysed in terms of frequency of going shopping, it shows that there is a difference only in ingredients variable information in packaged meat and dairy products. No matter how many times a week individuals go to the market, they equally care about the date and product/certificate information. Going to the market more or less often can be seen as the reason for the difference in the facts of the ingredient. Individuals who go to the market more often have more information about the ingredients of the product and do not feel the need to check whereas people who go to the market less often feel the need to check the information of the products.

### **Kaynakça**

- Bitrak, O. O. & Hatırlı, S. A. (2009). Socio-economic factors affecting household food consumption away from home in Isparta. *International Journal of Economics and Administrative Sciences*, 5(2), 46-63.
- Bousbia, A., Boudalia, S., Chelia, S., Oudaifia, K., Amari, H., Benidir, M., ... Hamzaoui, S. (2017). Analysis of factors affecting consumer behavior of dairy products in Algeria: A case study from the region of Guelma. *International Journal of Agriculture Research*, 12(2), 93-101.
- Çalmaşur, G. & Daştan, H. (2020). Factors affecting household food consumption away from home in Erzurum. *International Journal of Economics and Administrative Sciences*, 6(1), 97-111.
- Fierens, T., Servaes, K., Van Holderbeke, M., Geerts, L., De Henauf, S., Sioen, I. & Vanermen, G. (2012). Analysis of phthalates in food products and packaging materials sold on the Belgian market. *Food and Chemical Toxicology*, 50(7), 2575-2583.
- Font-i-Furnols, M. & Guerrero, L. (2014). Consumer preference, behavior and perception about meat and meat products: An overview. *Meat science*, 98(3), 361-371.
- Fornell, C. & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.

- Gaskin, J. Confirmatory Factor Analysis, [http://statwiki.kolobkcreations.com/index.php?title=Confirmatory\\_Factor\\_Analysis](http://statwiki.kolobkcreations.com/index.php?title=Confirmatory_Factor_Analysis).
- Grunert, K. G., Wills, J. M. & Fernández-Celemín, L. (2010). Nutrition knowledge, and use and understanding of nutrition information on food labels among consumers in the UK. *Appetite*, 55(2), 177-189.
- Güneş, F. E., Aktaç, Ş., Korkmaz, B. (2014). Behaviours and attitudes of Turkish consumers towards food labels. *Academic Food Journal*, 12(3), pp. 30-37.
- Joseph F. Hair Jr., William C. Black, Barry J. Babin & Rolph E. Anderson. (2014). *Multivariate Data Analysis Seventh Edition*, Pearson Education Limited.
- Kızılaslan, N. & Kızılaslan, H. (2008). Knowledge level and attitudes of the consumers related to the food products they buy (Tokat city example). *Journal of Agricultural Faculty of Uludag University*, 22(2), 67-74.
- Mutsikiwa, M. & Marumbwa, J. (2013). The impact of aesthetics package design elements on consumer purchase decisions: a case of locally produced dairy products in Southern Zimbabwe. *IOSR Journal of Business and Management*, 8(5), 64-71.
- Özgül, E. & Aksulu, İ. (2006). Ambalajlı gıda ürünlerinde tüketicilerin etiket duyarlılığındaki değişimler. *Ege Academic Review*, 6(1), 1-9.
- Özkan, B. (2022). Awareness, perception, attitude and expectations of university students towards halal food. *KAÜİİBFD*, 13(25), 129-159.
- Piedra, M. A., Schupp, A. R. & Montgomery, D. E. (1996). Consumer use of nutrition labels on packaged meats. *Journal of Food Distribution Research*, 27(2), 42-47.
- Sağlam, F., Gümüş, A. & Dokcan, B. (1999). Tüketicilerin besin satın alımına ilişkin bilgi tutum ve davranışları. *Beslenme ve Diyet Dergisi*, 28(1), 39-46.
- Schupp, A. R., Gillespie, J. M. & Reed, D. (1998). Consumer awareness and use of nutrition labels on packaged fresh meats: a pilot study. *Journal of Food Distribution Research*, 29(2), 24-30.
- Silayoi, P. & Speece, M. (2004). Packaging and purchase decisions: An exploratory study on the impact of involvement level and time pressure. *British Food Journal*, 106(8), 607-628.
- Silayoi, P. & Speece, M. (2007). The importance of packaging attributes: A conjoint analysis approach. *European Journal of Marketing*, 41(11/12), pp. 1495-1517.
- Ščetar, M., Barukčić, I., Kurek, M., Jakopović, K. L., Božanić, R., Galić, K. (2019). Packaging perspective of milk and dairy products. *Mljekarstvo/Dairy*, 69(1), 3-20.
- Tabachnick, B. G. & Fidell, L. S. (2015). *Using Multivariate Statistics* (Mustafa Baloğlu, Trans.) Ankara: Nobel.
- Tsiros, M. & Heilman, C. M. (2005). The effect of expiration dates and perceived risk on purchasing behavior in grocery store perishable categories. *Journal of Marketing*, 69(2), 114-129.
- Wardle, J., Haase, A. M., Steptoe, A., Nillapun, M., Jonwutiwes, K. & Bellis, F. (2004). Gender differences in food choice: the contribution of health beliefs and dieting. *Annals of Behavioral Medicine*, 27(2), 107-116.
- Wu, J., Teng, J. T. & Chan, Y. L. (2018). Inventory policies for perishable products with expiration dates and advance-cash-credit payment schemes. *International Journal of Systems Science: Operations & Logistics*, 5(4), 310-326.

## GENİŞLETİLMİŞ ÖZET

Bu çalışmanın amacı, günlük hayatımızda sıklıkla tükettiğimiz ambalajlı et ve süt ürünlerini satın alırken tüketicilerin ambalajların üzerinde bulunan bilgilere ne derece dikkat ettiklerinin belirlenmesi ve bu durumun demografik değişkenler açısından farklılık gösterip göstermediğinin ortaya çıkarılmasıdır.

Bu çalışma, ambalajlı et ve süt ürünleri satın alırken ambalaj üzerinde bulunan bilgilere yönelik dikkat edilen unsurların neler olduğunu sorgulamaktadır. Bu doğrultuda, et ve süt ürünlerinin ambalajlı olanlarının üzerinde bulunan bilgilerin tüketiciler tarafından ne kadar bilindiğinin, en çok hangi unsurlara dikkat edildiğinin belirlenmesi araştırmanın ana sorularındandır. Bununla birlikte, araştırmada bu bilgilere ne ölçüde dikkat edildiğinin demografik değişkenler açısından değişip değişmediği de sorgulanmaktadır.

Ambalajın birincil fonksiyonu ürünlerin korunmasını sağlamak ve ürünleri taşıma kolaylığı sağlamasıdır. Bu fonksiyonlar özellikle gıda ürünlerinde daha önemli hale gelmektedir. Ambalajlama, gıda ürünleri için önemli bir pazarlama aracı olarak değerlendirilmektedir (Silayoi ve Speece, 2004). Bununla birlikte, ambalaj; ürün ile ilgili olumlu veya olumsuz bir mesaj içeren bir sembol haline gelmektedir (Silayoi ve Speece, 2007). Tüketiciler gıda ürünü satın alırken ambalajın yanı sıra marka, besin değeri, besleyicilik, doyuruculuk, üretim ve son kullanma tarihi, üretim ve satış yeri hijyeni, gıdanın sağlıklı olma faktörlerini göz önünde bulundurmaktadırlar (Kızılaslan ve Kızılaslan, 2008). Ancak, ürünlerin algılan kalite riski azaldıkça son kullanma tarihini kontrol etme oranı da düşmektedir (Tsiros ve Heilman, 2005). Tüketicilerin gıda ürünleriyle ilgili en çok önem verdikleri unsurlar sırasıyla; ürünün son kullanma tarihi, TSE damgasına sahip olması, ürünün markası, tüketicilerin kendi alışkanlıkları ve ambalajlamadır (Sağlam vd., 1999).

Araştırma kapsamında verileri toplamak için anket yöntemi kullanılmıştır. Anket sorularını oluşturmak için, 2 tanesi bölgesel, 4 tanesi ulusal olmak üzere toplam 6 tane zincir markette, 12 farklı markanın et ve süt ürünlerinin ambalajlarında bulunan bilgiler tespit edilmiştir. Bu bilgiler arasında ürünlerin son kullanma tarihi, üretim tarihi, tavsiye edilen tüketim tarihi, enerji ve besin değerleri, yağ oranları, şeker ve tuz oranları, karbonhidrat değeri, protein değeri gibi bilgiler, fiyat, marka, miktar, muhafaza ve kullanım koşulları ve ürünün sahip olduğu sertifika bilgileri yer almaktadır. Söz konusu bilgiler bütün ürünler incelenerek kayıt edilmiştir. Bu bilgilerin hemen hemen hepsi et ve süt ürünlerinde aynıdır. Ambalajlar üzerinde yer alan bilgiler ve ambalajlar ile ilgili genel sorular olmak üzere et ve süt ürünleri için ayrı ayrı olmak üzere 21 sorudan oluşan iki ayrı anket formu hazırlanmıştır.

Ambalajlı et ve süt ürünleri üzerinde yer alan bilgilere yönelik tüketicilerin davranışlarını belirlemeyi amaçlayan bu çalışmada, tüketicilerin en çok tarih bilgilerine dikkat ettiği sonucuna ulaşılmıştır. En az dikkat edilen bilgiler ise ürünün içeriği ile ilgili bilgilerdir. Bu ürünlerin kısa sürede tüketilen ürünler olması ve dayanıksız olması tarih bilgilerinin en yüksek ortalamaya sahip olmasının sebebi olarak görülmektedir. Yapılan faktör analizleri sonucunda elde edilen içindekiler, tarih ve ürün/sertifika boyutları için cinsiyetler arasında yapılan analizde, kadın ve erkekler arasında anlamlı bir farklılık olmadığı sonucuna ulaşılmıştır. Ancak, her üç boyutta da kadınların ortalaması erkeklerden daha fazladır. Et ve süt ürünleri için yapılan analiz sonucunda, tüketiciler et ve süt ürünlerini satın alırken tarihlerini kontrol etmektedir. Bu sonuç, et ve süt ürünlerinin tarih bilgilerinin (son kullanma tarihi, üretim tarihi, tavsiye edilen tüketim tarihi) tüketiciler için önemli olduğunu göstermektedir. Et ve süt ürünleri bozulabilen, dayanıksız tüketim ürünleri olduğu için ve günü geçmiş bu tür ürünler sağlık açısından bir tehdit unsuru olduğu için tarih bilgileri her iki ürün grubu içinde dikkate değerdir. İçindekiler ve ürün/sertifika değişkenlerinde ise, et ve süt ürünleri arasında anlamlı farklılık bulunmaktadır. Buradan hareketle, tüketiciler için et ve süt içeriğinde bulunan bilgiler ve ürün/sertifika boyutu değişkenleri farklı şekillerde anlamlar ifade etmektedir. Bu durum, bireylerin; sağlık, maddiyat, beğeni vs. unsurlar açısından ürünlere farklı derecelerde önem verdiklerini göstermektedir.

Bireyler medeni durumlarına göre değerlendirildiğinde evli ve bekâr tüketicilerin her ikisi içinde et ve süt ürünlerinin tarih bilgileri aynı şekilde önem arz etmektedir. Bu durum, et ve süt ürünlerinin tarih bilgilerinin evli ve bekâr farkı gözetmeksizin her birey için önemli olduğunu göstermektedir. İçindekiler ve ürün/sertifika değişkenlerine evli bireyler bekâr bireylerden daha fazla dikkat etmektedir. Bir aile yapısının olması, aile ortamında bulunmak bu değişkenlere verilen önemin bir göstergesidir.

Et ve süt ürünlerinin her üç boyutuna da yaş farkı gözetmeksizin tüm bireyler aynı şekilde önem vermektedirler. Kendisi veya ailesi için alışveriş yapma yeteneğine sahip bütün tüketiciler et ve süt ürünlerinin üzerinde bulunan

bilgilere aynı derecede dikkat etmektedir. Bu durum, her yaştan bireyin konuyla ilgili duyarlılık sahibi olduğunun göstergesidir.

Eğitim seviyesi ne olursa olsun bireylerin ambalajlı et ve süt ürünlerine yaklaşımı aynı şekildedir. Bu durum, eğitim seviyesinin ürün bilgilerine dikkat etmek için bir kıtas olmadığını göstermektedir. Aynı şekilde bu bilgilerin kontrolü eğitilmiş olmayı da gerektirmemektedir.

Tüketiciler, markete gitme sıklığı açısından değerlendirildiğinde, ambalajlı et ve süt ürünlerinin üzerinde bulunan bilgilerden sadece içindikiler değişkeninde farklılık göstermektedir. Bireyler haftada kaç kere markete giderse gitsin tarih ve ürün/sertifika bilgilerine eşit derecede önem vermektedirler. Daha sık veya daha seyrek markete gitmek, içindikiler boyutunda bulunan bilgilerin kontrol edilmesindeki farklılığın nedeni olarak görülebilir. Markete daha sık giden bireyler ürünlerin içeriği hakkında daha fazla bilgi sahibi olarak kontrol ihtiyacı hissetmemekte veya daha az markete gidenler ürünlerin bilgilerini kontrol etme ihtiyacı hissetmektedir.